

Amendments to the Drawings

Attached is a replacement drawing sheet for Figures 10 and 11. Figure 10 is amended to include a programmable controller PC.

REMARKS

Reconsideration and further examination of the application are hereby requested. Claims 10, 11, 13, 14 and 16-28 are currently pending in the application. Claims 10, 11, 13, 14 and 16 have been amended. Claims 1-9 have been canceled without prejudice to being re-filed in one or more divisional applications. The limitations of canceled Claims 12 and 15 are recited in amended Claim 10. Claims 17-28 are newly added. No new matter has been entered.

A. OBVIOUSNESS BASED ON NISHIDA ALONE

Claims 10-15 have been rejected under 35 U.S.C. § 103(a) as being obvious over Nishida (U.S. Pat. No. 6 372 170) alone. This rejection is respectfully traversed based on the following arguments.

The Nishida reference discloses an injection molding machine that forms both a male and a female part in the same molding step. A die slide is used to bring the male part to the female part so that the male and female parts can then be molded together. These molded parts are not assembled together by plugging-in, but rather, by molding.

In order for a patent claim to be obvious, the prior art must teach or suggest each and every limitation recited in the claim. That is because the claim must be considered as a whole.

Claim 10 has been amended to recite structures of the invention explicitly rather than implicitly. Functional recitations have been re-drafted to explicitly recite structures that effect the functions and control other structures to cause the functions. Claims 10, as amended, recites the features:

an injection molding die for producing the injection molded parts ...

a programmable controller ... programmed to ... control the first mold ejector to eject a first one of the injection molded parts from the first cavity and insert the first one of the injection molded parts into the assembly holder ... control the second

mold half to move into the closed position for the injection mold die to produce additional injection molded parts ... control the second mold ejector to eject the second one of the injection molded parts from the second cavity and insert the second one of the injection molded parts into the assembly holder and plug the second one of the injection molded parts into the first one of the injection molded parts.

This combination of features is not taught or suggested by the prior art. Specifically, the Nishida reference does not teach both a structure that injection molds and a structure that plugs one part into another part. Nishida assembles parts to one another by molding them together, not by plugging them into another. A structure that only molds parts together does not suggest use of a structure that plugs parts into one another.

In order for a patent claim to be obvious, the prior art must teach or suggest each and every limitation recited in the claim. That is because the claim must be considered as a whole.

Because the Nishida reference does not teach or suggest the combination of molding structure and plugging in structure, the prior art does not establish a prima facie case of obviousness with respect to Claims 10, 13, 14, 17, 18 and 26-28.

Claim 11, now amended to be in independent form, recites the feature that:

for each of successive injection cycles, the assembly holders are delivered in a changed position relative to positions in the injection molding die for the injection molded parts and hold the injection molded parts respectively following in an assembly sequence at positions at which injection molded parts of at least one preceding assembly step are already positioned for insertion and plugging-in of the injection molded parts into the assembly holders.

The mold dies 10, 30 of the Nishida reference assemble together injection molded parts W_L , W_U from the same assembly step, not a part from a current assembly step and a part from

a preceding assembly step. The Examiner has interpreted one of the mold dies 30 of Nishida as reading on the claimed assembly platform. However, this claimed feature of holding an injection molded part respectively following in an assembly sequence at a position at which an injection molded part of at least one preceding assembly step is already positioned is not possible if one of the mold dies 10, 30 is read (according the Examiner's interpretation) as being an assembly platform. The mold dies 10, 30 will always place together for holding at a position parts formed in the same step. This above-noted, claimed feature is made possible by the structure of an assembly holder that is additional to the mold dies, and which is not taught by Nishida. For these reasons, Nishida does not establish a *prima facie* case of obviousness with respect to Claims 11 and 19-25.

B. OBVIOUSNESS BASED ON NISHIDA/BOUCHERIE COMBINATION

Claim 16 has been rejected under 35 U.S.C. § 103(a) as being obvious over Nishida in view of Boucherie (U.S. Pat. No. 6 379 139). This rejection is respectfully traversed based on the following arguments.

Claim 16 defines over the Nishida reference for the same reasons as explained above regarding the patentability of independent Claim 11 from which Claim 16 depends. Additionally, when the Boucherie reference is considered together with Nishida, Applicant notes that Boucherie does not cure the above-noted deficiencies of Nishida. Specifically, Boucherie does not provide a teaching or suggestion of holding an injection molded part respectively following in an assembly sequence at a position at which an injection molded part of at least one preceding assembly step is already positioned. Boucherie, as distinct from the claimed invention does not teach assembling together any parts. Rather, Boucherie teaches moving parts from one mold die to another mold die for further injection molding. No assembly through plugging-in of parts is taught or suggested by Boucherie. For these reasons,

Nishida and Boucherie do not establish a *prima facie* case of obviousness with respect to Claim 16.

C. NEW CLAIMS 17-28

New dependent Claims 19-25 all depend from independent Claim 11, and are believed to be patentable, at least for the same reasons as explained above regarding Claim 11.

New dependent Claims 17, 18 and 26-28 all depend from independent Claim 10, and are believed to be patentable, at least for the same reasons as explained above regarding Claim 10.

D. REVISIONS OF THE SPECIFICATION AND DRAWINGS

Numbered paragraph [0043] of the specification has been amended to make explicit reference to control of the manufacturing machinery by a programmable controller. This explicit reference to a programmable controller is not new matter since support for the programmable controller is abundantly implied by entire disclosure which presupposes a controller to initiate execution of the numerous sequential mechanical actions described. This explicit reference is appropriate in order to provide antecedent basis in the specification for what is recited in Claims 10, 25 and 26.

Figure 10 has been revised to include a rectangular representation to portray the programmable controller and its relationship to the manufacturing machinery of the present invention. This illustration is consistent with the amended paragraph [0043] in the specification and the amended claims.

E. CLOSING

For the foregoing reasons, Applicant respectfully submits that the application is in condition for immediate allowance with Claims 10-20.

If there remain any issues that may be addressed via a telephone conference, the Examiner is respectfully invited to

contact the undersigned at the telephone number provided below.

Respectfully submitted,



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